



## EPILEPSY FACT SHEET

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### What is Epilepsy

- Epilepsy is one of the most common neurological disorders, affecting 300,000 people in Canada and 50 million people worldwide
- Epilepsy is a group of disorders of the central nervous system, specifically the brain, and is characterized by recurrent unprovoked seizures
- Epilepsy can occur at any age
- Epilepsy is not contagious, and is rarely fatal
- Epilepsy has many different causes, and determining the specific cause for any one person's epilepsy may be difficult
- People with epilepsy have the same range of intelligence as the general public
- At least one in every 10 people will have one seizure in their lifetime

### What is a Seizure

- A seizure occurs when the normal electrical balance in the brain is lost. The brain's nerve cells misfire, either firing when they shouldn't or not firing when they should. Seizures are the physical effects of these sudden, brief, uncontrolled bursts of abnormal electrical activity
- The type of seizure depends on how many cells fire and which area of the brain is involved. A person that has a seizure may experience an alteration in behaviour, consciousness, movement, perception and/or sensation

### Types of Epilepsy

#### *Generalized Epilepsy*

- In generalized seizures, abnormal excessive electricity occurs involving both sides of the brain with no apparent focal point of onset or warning beforehand. Generalized seizures alter consciousness. They can be convulsive or non-convulsive.

#### *Partial Epilepsy*

- Partial seizures begin with an abnormal burst of electrical activity in a restricted area of the brain. The signs and symptoms of a partial seizure depend on what part of the brain is involved during the seizure. Partial seizures may be simple (with no loss of awareness), complex (with loss or alteration of awareness or may secondarily generalize to involve both sides of the brain and result in a convulsion).

## How is Epilepsy Diagnosed

- The doctor's diagnosis is based on a thorough evaluation of a seizure (including any witness observations), a physical examination, family history, and clinical tests of the brain function and structure.
- Brain function is tested via EEG (electroencephalography); brain structure is tested via CT Scan (computerized tomography scan) and MRI (magnetic resonance imaging) Epilepsy is a clinical diagnosis – there is no single diagnostic test that diagnoses this disorder

## How is Epilepsy Treated

### *Antiepileptic drugs (AEDs)*

- Antiepileptic drugs (AEDs) are the principal therapy for treating epilepsy. AEDs help control seizure activity. The ultimate goal of AED therapy is to establish perfect seizure control with minimal or no side effects from medication
- AEDs may be prescribed alone or in combination. Seizures are eliminated in about 50% of cases with the use of one AED (monotherapy)
- AEDs reduce the frequency and/or intensity of seizures in another 30% of cases. The remaining 20% of people may require large doses or more than one drug to control their seizures, or they may be drug-resistant. Therefore, there is a need to develop new drugs
- In a case of partial response to the first monotherapy, another AED can be added (adjunctive therapy)

### *Surgery*

- In a small percentage of cases, the surgical removal of the seizure focus (the part of brain where the person's seizures start) can eliminate all seizure activity.

### *Vagus Nerve Stimulation (VNS)*

- Vagus Nerve Stimulation (VNS) involves periodic mild electrical stimulation of the vagus nerve in the neck by a surgically implanted stimulating device (battery). VNS has been found effective in helping to control some epilepsies when AEDs alone have been inadequate or intolerable, or neurosurgery has not been an option
- Ketogenic Diet is another treatment for epilepsy that is sometimes used for certain types of epilepsy.

For all treatments please consult your specialist.

### **How Does Epilepsy Affect Daily Life**

- Epilepsy can be associated with profound physical, psychological and social consequences, and its impact on a person's quality of life.
- A number of factors are thought to contribute to this including the unpredictability of seizures as well as the stigma associated with epilepsy.
- People with epilepsy have an increased risk of poor self-esteem, depression and suicide.
- Epilepsy can also affect an individual's education, employment opportunities, independence and notably their ability to drive and hold a driver's license

For more information about epilepsy, visit [www.epilepsymatters.com](http://www.epilepsymatters.com) or [www.purpleday.org](http://www.purpleday.org), or please contact:

**Sources:**

[www.epilepsymatters.com](http://www.epilepsymatters.com), [www.purpleday.org](http://www.purpleday.org), [www.epilepsy.com](http://www.epilepsy.com)